UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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July 30, 2007

Ref: EPR-N

Misty A. Hays
Deputy District Ranger
Douglas Ranger District
2250 E. Richards St.
Douglas, WY 82633

RE: Thunder Basin Vegetation Management
DEIS
CEQ#20070244

Dear Ms. Hays,

The U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the Thunder Basin Analysis Area Vegetation Management Draft Environmental Impact Statement (DEIS). Our comments are provided in accordance with our authorities under the National Environmental Policy Act (NEPA), 42 U.S.C 4231 and Section 309 of the Clean Air Act. The U.S. Forest Service proposes to implement an updated vegetation management plan in three geographic areas within the Thunder Basin National Grassland, with the stated objective of resolving disparities between current conditions and the desired conditions specified in the Thunder Basin National Grassland Land Resource Management Plan. The preferred alternative, Alternative C, would implement best management grazing practices and activities associated with adaptive management and monitoring strategies to accomplish this objective.

EPA finds that the DEIS is commendably thorough and complete in its analysis of the impacts of the proposed action, no-action and current management alternatives. The document comprehensively addresses a number of foreseeable impacts. In general, EPA's concerns with the DEIS center on the degree of planning and commitment to adaptive management activities, the evaluation of riparian area health and water quality and the lack of a cohesive and proactive drought-management plan.

In Section 1.3.4, Purpose (Objectives), Desired Conditions, under Purpose and Need, one cited purpose of the vegetation management plan is, "improve and protect watershed conditions to provide the water quality and quantity and soil productivity necessary to support ecological functions and intended beneficial water uses. Permanent and repeatable transects and photo points would be established or re-measured to monitor long term riparian area health." However, in Section 3.7, Hydrology, it is noted that several reaches of the Upper Cheyenne Rover watershed are rated "Functional – At Risk" with respect to geology, soil, water and vegetative conditions. EPA is concerned that the heavy emphasis on monitoring and the apparent deferment of riparian management to such time as a trend is discernable introduces an

unnecessary lag between implementation of this vegetation management plan and the beginning of improvement of "at risk" riparian areas. Available literature on the topic suggests that total exclusion of grazers from riparian areas is most desirable, with multi-year rest periods required at minimum, to maintain and improve water quality and riparian ecosystem health (Belsky et al 1999). Please consider amending the preferred alternative to proactively restrict the scope and duration of grazing or excluding all grazers from riparian areas currently rated "Functional-At Risk" to protect and improve water quality, bank structure and riparian soil quality.

In Section 3.7, Hydrology, the condition of the Cheyenne River, Antelope Creek, Little Thunder Creek and other surface waters in the Analysis Area are summarized using WDEQ standard water quality classifications, which categorize watersheds according to the functions they are capable of supporting. EPA recommends that more quantitative and comprehensive indicators for water quality and stream health be included in the Final EIS to track trends and changes in water quality variables over time. These could include stream temperature, dissolved oxygen content, turbidity, sedimentation, settled solids including percent fines in spawning gravels and fecal coliform and total bacteria counts.

In Section 1.3.1, Desired Conditions, meeting or moving towards Proper Functioning Condition (PFC) is described as a desired condition for riparian areas. EPA considers PFC a minimum condition for riparian areas and is concerned that the employment of this standard as a desired long-term condition for riparian areas will be ineffective in maintaining and improving these areas' ecological structure and function, water quality and soil quality.

In Section 1.8, Decision Framework, the DEIS explains that decisions regarding specific actions to be taken will be made on a "case by case" basis, at the time of the drafting of specific AMPs. EPA is concerned that deferring planning may compromise the efficacy and defensibility of this adaptive management strategy. While general design criteria were included in substantial detail, the final EIS should include defined timelines, detailed decision trees, actions to be taken at given specific thresholds and allotment-specific strategies.

In Section 2.5, Table 8, Alternative 3, Adaptive Management Alternative (Proposed Action), several adaptive management options (fences, burning, seeding, range improvements, herding, etc.) are detailed. However, the degree of formal resource commitment to these options is unclear. In the Final EIS, please clarify to what extent resources have been committed to the implementation of these options.

EPA is concerned that the DEIS does not include a comprehensive, proactive drought management plan. While specific drought management strategies are described throughout the DEIS, a comprehensive, coherent and holistic drought-management strategy is not present. As climate change trends virtually assure frequent and long-duration droughts throughout the West for the duration of this EIS' planning period, EPA recommends inclusion of a drought management plan in the Final EIS.

In Section 3.11.1, Soils, Affected Environment, Methods, visual inspections are cited as the principal method to assay soil quality and erosion. EPA suggests that visual inspection be

supported by quantitative measurements of soil quality, such as compaction, aggregate size, organic carbon content, productivity and bulk density. Given the wide extent of soils rated "Unsatisfactory" in the analysis area, EPA advocates the inclusion of a quantitative soil quality monitoring plan in the Final EIS to track trends and changes in soil quality over time.

Under Section 2.5, Design Criteria for Alternative 3, the Adaptive Management Alternative (pg. 24), the DEIS specifies rest periods of 1-10% of all suitable rangeland. EPA is concerned that this rest period may be insufficient for adequate regeneration of biomass and vegetation structure, particularly in disturbance-sensitive areas, areas at risk for non-native species invasion, drought-stressed areas and riparian areas. In the Final EIS, please provide science demonstrating that this rest scheme will protect vegetation from overutilization and soil from erosion and quality loss.

In Appendix B, Table 2B, Effectiveness Monitoring Schedule, Frequency and Responsibility, the DEIS specifies 3-5 year monitoring intervals for riparian and sensitive habitat and for vegetation structure and seral stage trends and 5-10 intervals for monitoring of Term Grazing Permit compliance. EPA is concerned that this interval will not allow managers to sufficiently respond to rapidly changing conditions. The Final EIS should clarify how this monitoring scheme represents an improvement on current monitoring schemes and how this monitoring interval will provide sufficient data to inform a responsive, truly adaptive, grazing management strategy. Additionally, please clarify to what degree resources have been committed to these management activities.

Based on the procedures the EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and its alternatives in an EIS, EPA rates this DEIS as EC-2 (Environmental Concerns – Insufficient Information). An "EC" signifies that EPA's review of the DEIS has identified potential environmental impacts that should be avoided in order to provide adequate protection for the environment. A "2" rating signifies that the DEIS does not contain sufficient information for the EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment. A copy of EPA's rating criteria is attached.

These comments are intended to help ensure a comprehensive assessment of the project's environmental impacts, adequate public disclosure and an informed decision-making process for alternative selection. If you would like to discuss our comments, please feel free to contact me or the lead reviewer for this project, Charlie Lawton, at (303) 312-7037.

Sincerely,

/s/ Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

cc: Marilee Houlter, Douglas Ranger District, US Forest Service